

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Lewis et. al.	)	Examiner: Scott J. Haugland
	)	
Serial No.: 10/750,238	)	Art Unit: 3654
	)	
Filed: December 31, 2003	)	Deposit Acct. No.: 04-1403
	)	
Title: Apparatus and Method for	)	Confirmation No.: 8843
Dispensing Sheet Material	)	
	)	Customer No.: 22827

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**APPEAL BRIEF**

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
Post Office Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

The Applicants respectfully submit the enclosed Appeal Brief pursuant to 37 C.F.R. 41.37(c) and request that the final rejection of claims 1-11, 14-23, and 25-40 be reversed and that the application be remanded to the Examiner for allowance.

**I. REAL PARTY IN INTEREST**

The assignee Kimberly-Clark Worldwide, Inc. is the real party in interest.

**II. RELATED APPEALS AND INTERFERENCES**

Applicants, Applicants' legal representative, and assignee have no knowledge of other appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**III. STATUS OF CLAIMS**

Claims 1-11, 14-23, and 25-40 are pending, with claims 12, 13, and 24 previously cancelled. Claims 1-11, 14-23, and 25-40 stand rejected. Applicants appeal the final rejection of claims 1-11, 14-23, and 25-40.

**IV. STATUS OF AMENDMENTS**

Applicants filed an amendment after final on November 27, 2006, that did not amend any claims. The amendment was entered in the record.

**V. SUMMARY OF CLAIMED SUBJECT MATER**

The present invention describes and claims an apparatus and method for dispensing sheet material.

As recited in independent claim 1, the apparatus 10 is adapted to dispense a web of sheet material 12 from a continuous roll 14 (see ¶ [0034]; Fig. 1, 2). The apparatus 10 includes a support 30 configured to rotatably support the roll 14 of sheet material 12 (see ¶ [0036]; Fig. 1, 2). The support 30 includes identification 62 relating to absorbent characteristics of sheet material 12 on the roll 14 (see ¶ [0041]; Fig. 3). An identifier 60 is configured to identify the absorbent characteristics of sheet material 12 on the roll 14 from the identification 62 (see ¶¶ [0041]-[0042]; Fig. 3). A processor 66 is

configured to receive data relating to the absorbent characteristics of the sheet material 12 on the roll 14, process the data, and generate an output command (see ¶¶ [0046], [0050]; Fig. 4). A controller 68 is configured to control the length of sheet material 12 dispensed from the roll 14 in response to the output command (see ¶ [0050]; Fig. 4).

Independent claim 25 recites a dispenser 10 for dispensing sheet material 12 from a supply roll 14 including identification 62 relating to absorbent characteristics of sheet material on the roll (see ¶¶ [0034], [0041]; Fig. 1, 2, 3). The dispenser includes a dispenser housing 16 and a support 32, 34 for rotatably supporting the supply roll 14 within the dispenser housing 16 (see ¶¶ [0035]-[0036]; Fig. 1, 2). The dispenser 10 further includes an identifier 60 on or adjacent the support 32, 34 identifying the absorbent characteristics of sheet material 12 on the roll 14 from the identification 62 (see ¶¶ [0041]-[0042]; Fig. 3). A processor 66 receives identification data from the identifier 60, processes the data, and generates an output command (see ¶¶ [0046], [0050]; Fig. 4). A controller 68 controls the length of sheet materials 12 dispensed from the supply roll 14 in response to the output command (see ¶ [0050]; Fig. 4).

Independent claim 26 recites a method of dispensing a web of sheet material 12 from a continuous roll 14 (see ¶¶ [0034], [0050]; Fig. 1, 2, 3, 4). The method includes providing a roll 14 of sheet material 12 which includes identification 62 relating to absorbent characteristics of sheet material 12 on the roll 14 (see ¶ [0041]; Fig. 3). The method further includes rotatably supporting the roll of sheet material 12 adjacent an identifier 60 in a dispenser housing 16 (see ¶¶ [0035]-[0036]; Fig. 1, 2). The method identifies the absorbent characteristics of sheet material 12 on the roll 14 and processes data relating to the absorbent characteristics of sheet material 12 on the roll 14 to

generate an output command (see ¶¶ [0046], [0050]; Fig. 4). The method controls a length of sheet material 12 dispensed from the roll 14 in response to the output command (see ¶ [0050]; Fig. 4).

Independent claim 40 recites an apparatus 10 for dispensing a web of sheet material 12 from a continuous roll 14 (see ¶ [0034]; Fig. 1, 2). The apparatus 10 includes a support 30 for rotatably supporting a roll 14 of sheet material 12 (see ¶ [0036]; Fig. 1, 2). The support 30 includes identification 62 relating to absorbent characteristics of sheet material 12 on the roll 14 (see ¶ [0041]; Fig. 3). A first network (such as the Internet) operates in accordance with a predetermined protocol (see ¶¶ [0069]-0072]; Fig. 12). A second network comprises a plurality of microcontrollers (such as a LAN) (see ¶¶ [0069]-0072]; Fig. 12). A gateway 452 operatively couples the first network to the second network (see ¶¶ [0069]-0072]; Fig. 12). An HTTP server is embedded in either the gateway or the plurality microcontrollers (see ¶¶ [0069]-0072]; Fig. 12).

## VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

- A. Whether claim 1 is patentable under 35 U.S.C. 102(b) over U.S. Published Patent Application 2002/0117578 (Denen '578).
- B. Whether claim 25 is patentable under 35 U.S.C. 102(b) over U.S. Published Patent Application 2002/0117578 (Denen '578).
- C. Whether claim 26 is patentable under 35 U.S.C. 102(b) over U.S. Published Patent Application 2002/0117578 (Denen '578).
- D. Whether claim 40 is patentable under 35 U.S.C. 103(a) over U.S. Published Patent Application 2002/0117578 (Denen '578) in view of U.S. Patent 6,363,057 (Ardalan '057).
- E. Whether claim 1 is patentable under 35 U.S.C. 103(a) over U.S. Patent 6,419,136 (Formon '136) in view of U.S. Patent 6,894,711 (Yamakawa '711).
- F. Whether claim 25 is patentable under 35 U.S.C. 103(a) over U.S. Patent 6,419,136 (Formon '136) in view of U.S. Patent 6,894,711 (Yamakawa '711).
- G. Whether claim 40 is patentable under 35 U.S.C. 103(a) over U.S. Patent 6,419,136 (Formon '136) in view of U.S. Patent 6,894,711 (Yamakawa '711) and U.S. Patent 6,363,057 (Ardalan '057).

## VII. ARGUMENT

- A. Claim 1 is patentable under 35 U.S.C. 102(b) over U.S. Published Patent Application 2002/0117578 (Denen '578).

Applicants respectfully traverse the rejection of independent claim 1 under 35 U.S.C. 102(b) over Denen '578 for at least the reason that Denen '578 fails to disclose or teach the specific structure recited in claim 1. Specifically, claim 1 recites an apparatus adapted to dispense a web of sheet material from a continuous roll. The apparatus comprises identification relating to absorbent characteristics of sheet material on the roll, an identifier configured to identify the absorbent characteristics of sheet material on the roll from the identification, and a processor configured to receive data relating to the absorbent characteristics of the sheet material on the roll. The processor

is further configured to process the data and generate an output command, and a controller is configured to control the length of sheet material dispensed from the roll in response to the output command.

In contrast, Denen '578 discloses a sheet material dispenser with a perforation sensor 22 configured to sense perforations in the sheet material (see Denen '578, ¶ 0069). As correctly noted in the Final Office Action and Advisory Action, Denen '578 simply senses perforations. Although the perforations may be related to absorbent characteristics, this relationship is not necessarily true or reliable. Therefore, the apparatus in Denen '578 dispenses sheet material based on the location and detection of perforations in the sheet material, not the absorbent characteristics of the sheet material. As a result, the apparatus in Denen '578 requires the manufacturer of the sheet material to perforate the sheet material at specific intervals. In addition to requiring additional machinery to make the perforations, the perforations in the sheet material do not necessarily correlate to the absorbent characteristics of the sheet material.

The invention recited in independent claim 1 overcomes the disadvantages of Denen '578 by identifying the absorbent characteristics of the sheet material, regardless of the presence, spacing, or detection of perforations in the sheet material. This structural improvement is not disclosed or taught by Denen '578. Therefore, Applicants respectfully request withdrawal of the 35 U.S.C. 102(b) rejection of independent claim 1 based on Denen '578.

- B. Claim 25 is patentable under 35 U.S.C. 102(b) over U.S. Published Patent Application 2002/0117578 (Denen '578).

Applicants respectfully traverse the rejection of independent claim 25 under 35 U.S.C. 102(b) over Denen '578 for at least the reason that Denen '578 fails to disclose or teach the specific structure recited in claim 25. Specifically, claim 25 recites a dispenser for dispensing sheet material from a supply roll including identification relating to absorbent characteristics of sheet material on the roll. The dispenser comprises an identifier for identifying the absorbent characteristics of sheet material on the roll from the identification. The dispenser further includes a processor for receiving identification data from the identifier, processing the data, and generating an output command, and a controller for controlling the length of sheet materials dispensed from the supply roll in response to the output command.

As with independent claim 1 previously discussed, the invention recited in independent claim 25 overcomes the disadvantages of Denen '578 by identifying the absorbent characteristics of the sheet material, regardless of the presence, spacing, or detection of perforations in the sheet material. This structural improvement is not disclosed or taught by Denen '578. Therefore, Applicants respectfully request withdrawal of the 35 U.S.C. 102(b) rejection of independent claim 25 based on Denen '578.

- C. Claim 26 is patentable under 35 U.S.C. 102(b) over U.S. Published Patent Application 2002/0117578 (Denen '578).

Applicants respectfully traverse the rejection of independent claim 26 under 35 U.S.C. 102(b) over Denen '578 for at least the reason that Denen '578 fails to disclose or teach the specific method recited in claim 26. Specifically, claim 26 recites a method

of dispensing a web of sheet material from a continuous roll. The method comprises providing a roll of sheet material which includes identification relating to absorbent characteristics of sheet material on the roll, identifying the absorbent characteristics of sheet material on the roll, processing data relating to the absorbent characteristics of sheet material on the roll to generate an output command, and controlling a length of sheet material dispensed from the roll in response to the output command.

In contrast, Denen '578 discloses a sheet material dispenser with a perforation sensor 22 configured to sense perforations in the sheet material (see Denen '578, ¶ 0069). Although Denen '578 senses perforation that may relate to the absorbent characteristics, this relationship is not necessarily true or reliable, and Denen '578 does not disclose or teach identifying the absorbent characteristics. Therefore, the apparatus in Denen '578 senses perforations in the sheet material and dispenses the sheet material based on the location and detection of perforations in the sheet material. As a result, the apparatus in Denen '578 requires the manufacturer of the sheet material to perforate the sheet material at specific intervals. In addition to requiring additional machinery to make the perforations, the perforations in the sheet material do not necessarily correlate to the absorbent characteristics of the sheet material. Denen '578

As with independent claims 1 and 25 previously discussed, the invention recited in independent claim 26 overcomes the disadvantages of Denen '578 by identifying the absorbent characteristics of the sheet material, regardless of the presence, spacing, or detection of perforations in the sheet material. This method is not disclosed or taught by Denen '578. Therefore, Applicants respectfully request withdrawal of the 35 U.S.C. 102(b) rejection of independent claim 26 based on Denen '578.



- D. Claim 40 is patentable under 35 U.S.C. 103(a) over U.S. Published Patent Application 2002/0117578 (Denen '578) in view of U.S. Patent 6,363,057 (Ardalan '057).

Applicants respectfully traverse the rejection of independent claim 40 under 35 U.S.C. 103(a) over Denen '578 in view of Ardalan '057 for at least the reason that Denen '578 fails to disclose or teach the specific structure recited in claim 40, and Ardalan '057 does not correct this deficiency. Specifically, claim 40 recites an apparatus for dispensing a web of sheet material from a continuous roll. The apparatus comprises a support for rotatably supporting a roll of sheet material which includes identification relating to absorbent characteristics of sheet material on the roll.

As with independent claims 1 and 25 previously discussed, the invention recited in independent claim 40 overcomes the disadvantages of Denen '578 by identifying the absorbent characteristics of the sheet material, regardless of the presence, spacing, or detection of perforations in the sheet material. This method is not disclosed or taught by Denen '578, and Ardalan '057 does not correct this deficiency. Therefore, Applicants respectfully request withdrawal of the 35 U.S.C. 103(a) rejection of independent claim 40 based on the combination of Denen '578 and Ardalan '057.

- E. Claim 1 is patentable under 35 U.S.C. 103(a) over U.S. Patent 6,419,136 (Formon '136) in view of U.S. Patent 6,894,711 (Yamakawa '711).

Applicants respectfully traverse the rejection of independent claim 1 under 35 U.S.C. 103(a) over Formon '136 in view of Yamakawa '711 for at least the reason that Formon '136 fails to disclose or teach the specific structure recited in claim 1, and Yamakawa '711 does not correct this deficiency. Specifically, claim 1 recites an apparatus adapted to dispense a web of sheet material from a continuous roll. The apparatus comprises identification relating to absorbent characteristics of sheet material

on the roll, an identifier configured to identify the absorbent characteristics of sheet material on the roll from the identification, and a processor configured to receive data relating to the absorbent characteristics of the sheet material on the roll. The processor is further configured to process the data and generate an output command, and a controller is configured to control the length of sheet material dispensed from the roll in response to the output command.

Similar to the previous discussion with respect to Denen '578, Formon '136 discloses a dispensing apparatus that dispenses sheet material based on the location and detection of perforations in the sheet material, not the absorbent characteristics of the sheet material. Although the perforations may be related to absorbent characteristics, this relationship is not necessarily true or reliable. Therefore, the apparatus in Formon '136 dispenses sheet material based on the location and detection of perforations in the sheet material, not the absorbent characteristics of the sheet material. As a result, the apparatus in Formon '136 requires the manufacturer of the sheet material to perforate the sheet material at specific intervals. In addition to requiring additional machinery to make the perforations, the perforations in the sheet material do not necessarily correlate to the absorbent characteristics of the sheet material.

The invention recited in independent claim 1 overcomes the disadvantages of Formon '136 by identifying the absorbent characteristics of the sheet material, regardless of the presence, spacing, or detection of perforations in the sheet material. This structural improvement is not disclosed or taught by Forman '136, and Yamakawa '711 does not correct this deficiency. Therefore, Applicants respectfully request

withdrawal of the 35 U.S.C. 103(a) rejection of independent claim 1 based on the combination of Formon '136 and Yamakawa '711.

- F. Claim 25 is patentable under 35 U.S.C. 103(a) over U.S. Patent 6,419,136 (Formon '136) in view of U.S. Patent 6,894,711 (Yamakawa '711).

Applicants respectfully traverse the rejection of independent claim 25 under 35 U.S.C. 103(a) over Formon '136 in view of Yamakawa '711 for at least the reason that Formon '136 fails to disclose or teach the specific structure recited in claim 25, and Yamakawa '711 does not correct this deficiency. Specifically, claim 25 recites a dispenser for dispensing sheet material from a supply roll including identification relating to absorbent characteristics of sheet material on the roll. The dispenser comprises an identifier for identifying the absorbent characteristics of sheet material on the roll from the identification. The dispenser further includes a processor for receiving identification data from the identifier, processing the data, and generating an output command, and a controller for controlling the length of sheet materials dispensed from the supply roll in response to the output command.

As with independent claim 1 previously discussed, the invention recited in independent claim 25 overcomes the disadvantages of Formon '136 by identifying the absorbent characteristics of the sheet material, regardless of the presence, spacing, or detection of perforations in the sheet material. This structural improvement is not disclosed or taught by Forman '136, and Yamakawa '711 does not correct this deficiency. Therefore, Applicants respectfully request withdrawal of the 35 U.S.C. 103(a) rejection of independent claim 25 based on the combination of Formon '136 and Yamakawa '711.

- G. Claim 40 is patentable under 35 U.S.C. 103(a) over U.S. Patent 6,419,136 (Formon '136) in view of U.S. Patent 6,894,711 (Yamakawa '711) and U.S. Patent 6,363,057 (Ardalan '057).

Applicants respectfully traverse the rejection of independent claim 40 under 35 U.S.C. 103(a) over Formon '136 in view of Yamakawa '711 for at least the reason that Formon '136 fails to disclose or teach the specific structure recited in claim 40, and Yamakawa '711 does not correct this deficiency. Specifically, claim 40 recites an apparatus for dispensing a web of sheet material from a continuous roll. The apparatus comprises a support for rotatably supporting a roll of sheet material which includes identification relating to absorbent characteristics of sheet material on the roll.

As with independent claims 1 and 25 previously discussed, the invention recited in independent claim 40 overcomes the disadvantages of Forman '136 by identifying the absorbent characteristics of the sheet material, regardless of the presence, spacing, or detection of perforations in the sheet material. This method is not disclosed or taught by Forman '136, and Yamakawa '711 does not correct this deficiency. Therefore, Applicants respectfully request withdrawal of the 35 U.S.C. 103(a) rejection of independent claim 40 based on the combination of Formon '136 and Yamakawa '711.

#### **VIII. CLAIMS APPENDIX A**

See attached listing of pending claims involved in this appeal.

#### **IX. EVIDENCE APPENDIX B**

Applicants do not rely on any evidence submitted pursuant to 37 CFR 1.130, 1.131, or 1.132 or any other evidence entered by the examiner in this appeal.

#### **X. RELATED PROCEEDINGS APPENDIX C**

Applicants are not aware of any decision rendered by a court of the Board in any related appeals or interferences.

For at least the reasons discussed above, the Applicants respectfully submit that the final rejection of claims 1-11, 14-23, and 25-40 should be reversed and that the application be remanded to the Examiner for allowance.

February 22, 2007

Respectfully submitted,



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## APPENDIX A – PENDING CLAIMS

The following is a listing of the claims involved in this appeal:

1. An apparatus adapted to dispense a web of sheet material from a continuous roll, the apparatus comprising:
  - a support configured to rotatably support a roll of sheet material which includes identification relating to absorbent characteristics of sheet material on the roll;
  - an identifier configured to identify the absorbent characteristics of sheet material on the roll from the identification;
  - a processor configured to receive data relating to the absorbent characteristics of the sheet material on the roll, the processor further configured to process the data and generate an output command; and
  - a controller configured to control the length of sheet material dispensed from the roll in response to the output command.
2. The apparatus of claim 1, wherein the identifier comprises a reader for reading data from identification on the roll of sheet material.
3. The apparatus of claim 2, wherein the reader is configured to read data from a label, a logo, a bar code, a magnetic strip, an RFID tag, or a hologram on the roll of sheet material.
4. The apparatus of claim 2, wherein the reader is arranged to read data from identification on a core of the roll of sheet material.

5. The apparatus of claim 2, wherein the reader is arranged to read data from identification on the sheet material.

6. The apparatus of claim 2, wherein the identification on the roll of sheet material is encoded, and the apparatus includes a decoder for decoding the encoded data.

7. The apparatus of claim 2, wherein the reader is positioned inside of the dispenser.

8. The apparatus of claim 2, wherein the reader is positioned adjacent the dispenser.

9. The apparatus of claim 3, wherein the reader is arranged to read data from an RFID tag embedded in or attached to a core of the roll of sheet material.

10. The apparatus of claim 1, including an infrared emitter/detector circuit which is arranged to emit infrared light into a core of the roll of sheet material, and to detect reflection of the light off reflective identification on a core of the roll.

11. The apparatus of claim 10, wherein the reflective identification is configured such that the reflectivity is controlled, therefore permitting control of total reflected light.

12. (Canceled).

13. (Canceled).

14. The apparatus of claim 1, wherein the processor includes an algorithm stored in a chip set embedded on a printed circuit board.

15. The apparatus of claim 1, wherein the processor is arranged to receive data from the identifier, to process the data, to generate an output command, and to transmit the output command to the controller.

16. The apparatus of claim 1, wherein the support is contained within a dispenser housing.

17. The apparatus of claim 16, wherein an activation switch is provided for activating the identifier when the dispenser housing is opened, thereby to allow identification of a roll of sheet material inserted onto the support.



18. The apparatus of claim 15, wherein a deactivation switch is provided for deactivating the identifier after identification of the sheet material on the roll.

19. The apparatus of claim 16, including a delay switch for providing a delay between successive dispensing operations.

20. The apparatus of claim 17, including a lockout switch for preventing operation of the controller when the dispenser housing is open.

21. The apparatus of claim 1, including an electric motor for automatically dispensing the sheet material.

22. The apparatus of claim 19, wherein the controller controls the number of revolutions of the electric motor in response to the output command.

23. The apparatus of claim 19, wherein an external sensor is provided for sensing a user's hand, and the electric motor is activated so as to dispense sheet material in response to the sensing of the user's hand.

24. (Canceled).

25. A dispenser for dispensing sheet material from a supply roll including identification relating to absorbent characteristics of sheet material on the roll, the dispenser comprising:

- a dispenser housing;
- a support for rotatably supporting the supply roll within the dispenser housing;
- an identifier on or adjacent the support for identifying the absorbent characteristics of sheet material on the roll from the identification;
- a processor for receiving identification data from the identifier, processing the data and generating an output command; and
- a controller for controlling the length of sheet materials dispensed from the supply roll in response to the output command.

26. A method of dispensing a web of sheet material from a continuous roll, the method comprising:

- providing a roll of sheet material which includes identification relating to absorbent characteristics of sheet material on the roll;
- rotatably supporting the roll of sheet material adjacent an identifier in a dispenser housing;
- identifying the absorbent characteristics of sheet material on the roll;
- processing data relating to the absorbent characteristics of sheet material on the roll to generate an output command; and
- controlling a length of sheet material dispensed from the roll in response to the output command.

27. The method of claim 26, wherein the identifier comprises a reader, and the step of identifying the absorbent characteristics of sheet material on the roll comprises reading data from identification on the roll of sheet material.

28. The method of claim 27, wherein the step of reading data comprises reading data from a label, a logo, a bar code, a magnetic strip, a RFID, or a hologram on the roll of sheet material.

29. The method of claim 27, wherein the step of reading data comprises reading data from identification on a core of the roll of sheet material.

30. The method of claim 27, wherein the step of reading data comprises reading data from identification on the sheet material.

31. The method of claim 27, wherein the step of identifying the absorbent characteristics of sheet material on the roll includes decoding encoded identification on the roll of sheet material.

32. The method of claim 27, wherein the step of reading data comprises reading data from an RFID tag embedded in or attached to the core of the roll of sheet material.

33. The method of claim 26, wherein the step of identifying the absorbent characteristics of sheet material on the roll comprises emitting infrared light into the core of the sheet material roll, and detecting reflection of the light off reflective identification on the core of the roll.

34. The method of claim 26, including the step of activating the identifier when the dispenser housing is opened so as to allow for identification of the absorbent characteristics of sheet material on a roll inserted onto the support.

35. The method of claim 34, including the step of deactivating the identifier after identification of the sheet material on the roll.

36. The method of claim 26, including the step of providing a delay between successive dispensing operations.

37. The method of claim 26, including the step of dispensing the length of sheet material with an electric motor.

38. The method of claim 26, including the step of dispensing the length of sheet material in response to sensing a user's hand adjacent the dispenser housing.

39. A roll of sheet material for use in the method of claim 26, the roll including identification which is identifiable by the identifier so as to allow for the controlled dispensing of sheet materials from the roll.

40. An apparatus for dispensing a web of sheet material from a continuous roll, the apparatus comprising:

a support for rotatably supporting a roll of sheet material which includes identification relating to absorbent characteristics of sheet material on the roll;

a first network operating in accordance with a predetermined protocol;

a second network comprising a plurality of microcontrollers;

a gateway operatively coupled to said first network and to said second network;

and

an HTTP server embedded in one of said gateway and said plurality microcontrollers.

**APPENDIX B – EVIDENCE**

None.

**APPENDIX C - RELATED PROCEEDINGS**

None.